

Title (en)

APPARATUS AND METHOD TO LOCATE AN OBJECT IN A PIPELINE

Title (de)

VORRICHTUNG UND VERFAHREN ZUM FINDEN EINES OBJEKTS IN EINER PIPELINE

Title (fr)

APPAREIL ET PROCÉDÉ POUR LOCALISER UN OBJET DANS UN PIPELINE

Publication

**EP 2297591 A4 20120201 (EN)**

Application

**EP 09768678 A 20090625**

Priority

- CA 2009000891 W 20090625
- US 7549708 P 20080625

Abstract (en)

[origin: WO2009155708A1] Apparatus for locating an object in a pipeline, comprising a transmitting station having means for transmitting in the pipeline acoustic emissions having a frequency in the range from 20 KHz to 200 KHz; a receiving station having a receiver capable of receiving the acoustic emissions transmitted by the transmitting station; one of the receiving station and the transmitting station being located at a known position on the pipeline and the other of the receiving station and the transmitting station being located on the object; and clock means to determine the time taken for the acoustic emissions to travel between the transmitting station and the receiving station.

IPC 8 full level

**F16L 55/26** (2006.01); **F16L 55/48** (2006.01); **F17D 5/00** (2006.01); **F17D 5/06** (2006.01); **G01H 5/00** (2006.01); **G01S 11/14** (2006.01)

CPC (source: EP US)

**F16L 55/48** (2013.01 - EP US); **F17D 5/06** (2013.01 - EP US); **G01S 11/14** (2013.01 - EP US)

Citation (search report)

- [I] US 2008008043 A1 20080110 - JONG ALWIN DE [NL]
- [I] EP 0161689 A2 19851121 - HITACHI LTD [JP], et al
- [IA] JP S58122412 A 19830721 - KOGYO GIJUTSUIN
- See references of WO 2009155708A1

Citation (examination)

- WO 2004074633 A1 20040902 - TNO [NL], et al
- US 2005007877 A1 20050113 - MARTIN LOUIS PETER [US], et al
- US 2005007877 A1 20050113 - MARTIN LOUIS PETER [US], et al

Cited by

CN104763879A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

BA

DOCDB simple family (publication)

**WO 2009155708 A1 20091230**; AU 2009261918 A1 20091230; AU 2009261918 B2 20150115; BR PI0915515 A2 20160126; CA 2728818 A1 20091230; CN 102132170 A 20110720; EA 201170081 A1 20110830; EP 2297591 A1 20110323; EP 2297591 A4 20120201; IL 210146 A0 20110331; IL 210146 A 20161031; MX 2010014443 A 20110404; NZ 590023 A 20120525; US 2011103189 A1 20110505

DOCDB simple family (application)

**CA 2009000891 W 20090625**; AU 2009261918 A 20090625; BR PI0915515 A 20090625; CA 2728818 A 20090625; CN 200980132955 A 20090625; EA 201170081 A 20090625; EP 09768678 A 20090625; IL 21014610 A 20101221; MX 2010014443 A 20090625; NZ 59002309 A 20090625; US 200913000473 A 20090625